

ABSTRACT

A storage device employing the ramp load/unload technique for an actuator is disclosed that has high shock-resistance, high vibration-resistance, and is capable of rapid and stable ramp load/unload operations. A position detection unit integrates the speed of the actuator, obtained by detecting a back electromotive force generated in a VCM, to calculate the present position of the magnetic head. A position determination unit compares the present position of the magnetic head with a series of position thresholds, and based on the comparison results, a bandwidth switching unit switches the bandwidth of a PI controller for feedback control of the actuator, from a narrow bandwidth to a wide bandwidth and vice versa. At positions where the speed starts to change or the speed change becomes small, the position determination is performed and the bandwidth is appropriately switched.